

# Damaging

# *Wind* & Hail



Butler County, May 3, 2005

## *Straight-Line Damaging Wind*

Straight-line damaging wind does occur in some thunderstorms each year in Alabama. They may down trees and power lines, overturn mobile homes, and cause damage to well-built structures.

Storm reports immediately after a severe weather event usually attribute significant damage to a tornado when actually strong straight-line wind is responsible. In fact, straight-line wind events are more common than tornadoes in Alabama. During a typical year, Alabama experiences straight-line wind events 10 to 20 times more than tornado events.

## *Downburst*

Another type of non-tornadic damaging wind from thunderstorms is a downburst. A downburst refers to a very small area of rapidly descending air beneath a thunderstorm that strikes the ground, producing isolated areas of significant damage from high wind. Wind speeds in downbursts usually exceed 60 mph and can exceed 100 mph on rare occasions. Just like a tornado, they may be accompanied by a loud roar. As a result, downbursts are often mistaken as tornadoes.

Downbursts mainly occur during the summer months in a few afternoon thunderstorms. The combination of warm, moist, unstable air near the surface and cool, dry air at the mid-levels of the atmosphere supports downbursts in thunderstorms.

Since downbursts develop quickly in only a few select thunderstorms, they are very difficult to detect and usually occur with little or no advance notice.



Even the National Weather Service is not immune from damaging winds.  
(WSR-88D Doppler Radar)

## *Hail*

Although hail forms in every thunderstorm that develops, it only reaches the ground if the atmospheric conditions are favorable. Hail typically has the best chance of falling to the ground in springtime thunderstorms when the atmosphere is colder, especially at the mid and high levels. Hail may take on many different sizes and shapes such as that of a thin flat penny or that of a baseball.

Large hail can be very dangerous. It can cause damage to objects such as motor vehicles, structures, and trees. Bodily injuries or even deaths can result if people are caught outdoors when large hail occurs.



Montgomery (Montgomery County), April 5, 2005